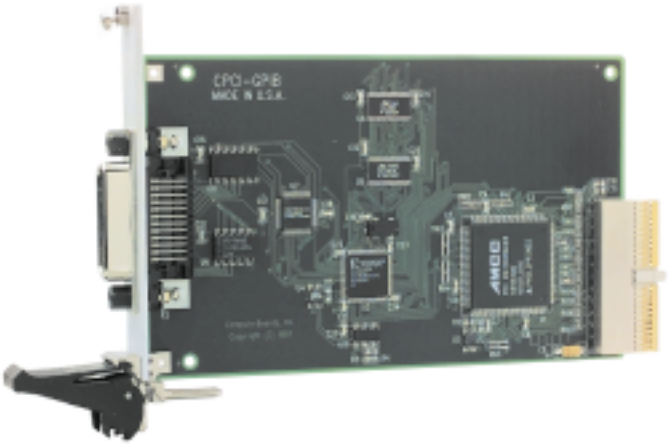
# CPCI-GPIB

## Highest Performance IEEE-488.2 Interface and Driver Software for Compact PCI Bus



## Features

IEEE 488.2 Standard interface
Complete Talker/Listener/Controller
Uses the new industry standard CB7210.2
Industry Standard 32 Bit Compact PCI Bus
Data transfer rates over 1Mega bytes/sec
REP-INSW block transfer
1024 Word FIFO buffer
High Speed State Machine Bus Manager
RF shielded IEEE-488 cable connector
Transparent interrupt enabling/disabling

Includes GPIB-Library complete software support

## DESCRIPTION

The CPCI-GPIB IEEE-488 interface converts any 3U compatible Compact PCI bus personal computer into an instrumentation control and data acquisition system. Connect up to 14 instruments using standard IEEE-488 cables such as the C488-2M, 2 meter IEEE-488 interface cable.

The CPCI-GPIB is designed around the new industry standard CB7210.2 GPIB chip.

## Greater than 1MB/s Transfer Rates

The CPCI-GPIB transfers data over the GPIB at rates in excess of 1 million bytes per second using the maximum IEEE-488 specification cable length (2 meters times the # of devices). A 1024 Word FIFO buffer and the advanced REP-INSW ISR transfer method provide all the horsepower required to achieve the highest possible rates.

Controlled by ComputerBoards' advanced High Speed State Machine Bus Manager, the CB7210.2 and FIFO buffer are able to absorb all the information coming from the highest speed instruments. The high speed state machine provides byte-to-word packing and unpacking and since words carry twice the information bytes do, packed data requires fewer bus cycles to transfer the same GPIB information.

Worried that you may need more than 1.5MB/s? Consider that Hewlett-Packard, the world's largest instrument manufacturer, does not manufacture an instrument that transfers data over the GPIB at greater than 800KB/s!

## IEEE-488.2 (GPIB) Compatibility

The PCI-GPIB adheres to ANSI/IEEE Standard 488-1978. Often referred to as the IEEE-488.2 bus, GPIB or HP-IB, the GPIB (**G**eneral **P**urpose **I**nterface **B**us) is a standard for instrumentation communication and control for instruments from manufacturers the world over. The GPIB provides handshaking and interface communications over an 8 bit data bus with 5 control and 3 handshake signals.

Equipped with a CPCI-GPIB, a Compact PCI computer can:

Control GPIB instruments.
Gather data from GPIB test equipment.
Become a data acquisition station in a GPIB system.

## Plug & Play - No switches or jumpers

The CPCI-GPIB is a true plug and play device. Plug in the CPCI-GPIB and run the installation software then start communicating. The Plug and Play specification is a standard for system configuration of boards and software which automatically configures the address and interrupt level of the CPCI-GPIB. Note, the CPCI-GPIB does not use DMA in favor of the superior REP-INSW high speed transfer.

The circuitry and software required for the Plug and Play standard implements identification and configuration, conflict detection and resolution. ComputerBoards uses the industry standard AMCC 5933 PCI controller chip to implement plug and play.

## Windows 95, Windows 3.1 and DOS Compatibility

The CPCI-GPIB hardware supports all the operating systems and languages regardless of the operating systems support for plug and play. The installation software will manage resources for you on non-plug and play systems.

## Specifications

The CPCI-GPIB is compatible with IEEE-488.1 and IEEE-488.2 specifications.

| | |
|---|---|
| Transfer Rate | >1Mbyte/sec |
| Power | 5VDC @ 375mA Typical |
| Dimensions | 3U format<br>approx. 6.375 X 3.95 Inches |
| I/O Connector | IEEE-488 Standard 24 pin |
| Operating Temp. & Hum. | 0-60 Degrees C @ 10-90% |
| Storage Temp. & Hum. | -40 to 100 Degrees C @ 5-90% |